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PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:
JOSEPH S. TRIPOLI
C/O THOMSON LICENSING INC.
TWO INDEPENDENCE WAY, SUITE #200
PRINCETON, NJ 08540

GS
JN

PCT

NOTIFICATION OF TRANSMITTAL OF
INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Rule 71.1)

Date of mailing
(day/month/year)

08 APR 2005

Applicant's or agent's file reference

PU020487

IMPORTANT NOTIFICATION

International application No.

PCT/US03/36413

International filing date (day/month/year)

13 November 2003 (13.11.2003)

Priority date (day/month/year)

04 December 2002 (04.12.2002)

Applicant

THOMSON LICENSING S.A.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the *PCT Applicant's Guide*.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed invention is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the IPEA/ US

Mail Stop PCT, Attn: IPEA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
Facsimile No. (703) 305-3230

Authorized officer

Chris Kelley

Telephone No. 571-272-7331

Raven L. Ward

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PU020487	FOR FURTHER ACTION	See Form PCT/IPEA/416																								
International application No. PCT/US03/36413	International filing date (day/month/year) 13 November 2003 (13.11.2003)	Priority date (day/month/year) 04 December 2002 (04.12.2002)																								
International Patent Classification (IPC) or national classification and IPC IPC(7): H04B 7/12, 11/02, 11/04 and US Cl.: 375/240.01, 240.12, 240.16; 348/590, 699, 700																										
Applicant THOMSON LICENSING S.A.																										
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of ___ sheets, as follows:</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>																										
<p>4. This report contains indications relating to the following items:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 20%;">Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>			<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input checked="" type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Date of submission of the demand 01 July 2004 (01.07.2004)	Date of completion of this report 01 April 2005 (01.04.2005)																									
Name and mailing address of the IPEA/ US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Chris Kelley Telephone No. 571-272-7331																									

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International Application No.

PCT/US03/36413

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

☐ international search (under Rules 12.3 and 23.1(b))

☐ publication of the international application (under Rule 12.4)

☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☒ the international application as originally filed/furnished

☒ the description:

pages 1-18 _____ as originally filed/furnished

pages* NONE _____ received by this Authority on _____

pages* NONE _____ received by this Authority on _____

☒ the claims:

pages 19-23 _____ as originally filed/furnished

pages* NONE _____ as amended (together with any statement) under Article 19

pages* NONE _____ received by this Authority on _____

pages* NONE _____ received by this Authority on _____

☒ the drawings:

pages 1/1-3/3 _____ as originally filed/furnished

pages* NONE _____ received by this Authority on _____

pages* NONE _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (specify): _____

☐ any table(s) related to the sequence listing (specify): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (specify): _____

☐ any table(s) related to the sequence listing (specify): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International Application No.

PCT/US03/36413

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application

☒ claims Nos. 9-25

because:

☐ the said international application, or the said claim Nos. ____ relate to the following subject matter which does not require an international preliminary examination (*specify*):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. ____ are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. ____ are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for said claims Nos. 9-25

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐

has not been furnished

☐

does not comply with the standard

the computer readable form

☐

has not been furnished

☐

does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.

☐ See Supplemental Box for further details.

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims <u>2-8</u>	YES
	Claims <u>1</u>	NO
Inventive Step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-8</u>	NO
Industrial Applicability (IA)	Claims <u>NONE</u>	YES
	Claims <u>1-8</u>	NO

2. Citations and Explanations (Rule 70.7)

Claim 1 lacks novelty under PCT Article 33(2) as being anticipated by US Patent 6,570,923 to Saunders et al. As shown in Figure 8, Saunders teaches a video encoder for encoding video signal data for at least one cross-fade picture disposed temporally between a fade-out start picture (Video A) and a fade-in picture (Video B), which are used as reference pictures for coding the at least one cross-fade picture. The encoder comprises a reference picture weighting applicator (120) and a reference picture weighting factor unit (110) in signal communication with the reference picture weighting applicator for assigning weighting factors corresponding to each of the fade-out start picture and the fade-in end picture, respectively, for coding the at least one cross-fade picture (Col 4 Lines 40-Col 5 Lines 25).

Claims 2 and 4-6 lack an inventive step under PCT Article 33(3) as being obvious over Saunders in view of 'Fast Dissolve Operations For MPEG Video Contents' by Yoneyama et al.

In regards to claim 2, Saunders teaches the use of motion vectors to produce a cross-fade picture in MPEG-2 video streams (Col 1 Line 38, Col 6 Lines 20-35). Saunders further teaches the picture weighting applicator connected to an encoder (E2, Figure 8). Saunders does not specifically teach the use of a compensation unit for providing a motion compensated fade-out start or end picture responsive to the reference picture weighting factor unit. Yoneyama teaches the adjusting of motion vectors for use with a dissolve operation for MPEG-2 video (Sections 3-1 through 3-2, Figure 2). Yoneyama specifically teaches in Figure 2, the encoding process contains a motion compensation unit. It would have been obvious to employ the system of Saunders with the system of Yoneyama as both are similar systems for producing a dissolve effect in MPEG-2 video.

In regards to claim 4, Yoneyama further shows in Figure 2, the dissolve effect is performed on motion compensated reference frames.

In regards to claim 5, Saunders and Yoneyama both teach the use of MPEG-2 encoding which supports bi-directional encoding.

In regards to claim 6, Saunders teaches the fade-out start and fade-out end pictures are at opposite directions to all of the at least one cross-fade pictures (Col 3 Lines 65-67, Col 5 Lines 10-25, Figure 2). Yoneyama also teaches the fade-out start and fade-out end pictures are at opposite directions to all of the at least one cross-fade pictures (Sections 3-1 to 3-2 and Figure 2). It would have been obvious to employ the system of cross-fading as taught by Saunders and Yoneyama.

Claims 3, 7 and 8 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest a video encoder as described in the claims.

In regards to claim 3, the claim teaches the use of a reference memory connected to both the motion compensation unit and the picture weighting applicator. This feature taken with the others in the claim is not taught by Saunders or Yoneyama.

In regards to claim 7, the claim teaches the connection of a motion estimation unit to the reference picture weighting factor unit. This feature taken with the others in the claim is not taught by Saunders or Yoneyama.

In regards to claim 8, the claim teaches the use of a summing unit in signal communication with the reference picture weighting factor unit. This feature taken with the others in the claim is not taught by Saunders or Yoneyama.

----- NEW CITATIONS -----
NONE